UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/706,546 | 11/12/2003 | Feng-Wei Chen Russell | RSW920030186US1 | 6883 |

23550 7590 11/01/2007
HOFFMAN WARNICK & D'ALESSANDRO, LLC
75 STATE STREET
14TH FLOOR
ALBANY, NY 12207

| EXAMINER |
|---|
| TIMBLIN, ROBERT M |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2167 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 11/01/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/706,546 | RUSSELL ET AL. | |
| | Examiner | Art Unit | |
| | Robert M. Timblin | 2167 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *14 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

This office action corresponds to application 10/706,546 filed 8/14/2007.

### *Response to Amendment*

The Applicant herein has amended claims, 1, 9, 16, and 24. No new claims have been added leaving claims 1-31 pending prosecution.

### *Claim Objections*

In light of the present amendments, the previous claim objections have been accordingly withdrawn.

### *Claim Rejections - 35 USC § 101*

The Amendment to claim 16 including a processor and memory are sufficient to indicate the use of hardware in the computerized system. Accordingly the previous 35 U.S.C. 101 rejection is withdrawn.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Gorelik et al. ('Gorelik' hereinafter) U.S. Patent Application 2005/0055369 A1.

**With respect to claim** 1, Gorelik teaches a computer-implemented method for mapping a user data schema to a mining model schema, comprising:

matching columns of the user data schema to corresponding columns of the mining model schema ([0031, 0058, 0118]) to provide a mapping (abstract, [0015] and [0198]) by performing a number of unique types ([0370]-0383]) of matching processes [0536] in sequence until a match is found, ([0055] and 606 of figure 6) wherein at least one of the number of unique matching process does not utilize an external matching resource (metadata index; [0205]);

determining whether data within matching columns of the user data schema has a data type different than data within the corresponding columns of the mining model schema (binding; [0048] and correlation [0052]);

transforming the data within the matching columns of the user data schema if the data type is determined to be different (transformation function ([0059], type conversion rules [0237], and transformation discovery [0048-0052]); and

updating a matching resource based on the mapping (updating the metadata index [0221]).

**With respect to claims 2, 17, and 25**, Gorelik teaches providing an opportunity to manually alter the mapping after transforming the data ([0159-0160]); and

presenting a final view of the mapping after providing the opportunity, wherein the updating step is performed after the final view is presented (figures 7A-7B).

Claims 17 and 25 are essentially similar to claim 2 and therefore are rejected for the same rationale.

**With respect to claims 3, 10, 18, and 26**, Gorelik teaches determining whether names of the columns of the user data schema exactly match names of the columns of the mining model data schema (absolute match [0055]).

Claims 10, 18, and 26 are essentially similar to claim 3 and therefore are rejected for the same rationale.

**With respect to claims 4, 11, 19, and 27**, Gorelik teaches determining whether the names of the columns of the user data schema are similar to the names of the columns of the mining model data schema based on the matching resource ([0198]-[0206]).

Claims 11, 19, and 27 are essentially similar to claim 4 and therefore are rejected for the same rationale.

**With respect to claims 5, 12, 20, and 28**, Gorelik teaches determining whether the names of the columns of the user data schema match the names of the columns of

the mining model schema based on one or more formulae (table 1 of page 9 and [0210] to at least [0220].

Claims 12, 20, and 28 are essentially similar to claim 5 and therefore are rejected for the same rationale.

**With respect to claims 6, 13, 21, and 29**, Gorelik teaches determining whether the data within the columns of the user data schema corresponds to the data within the columns of the mining model data schema (corresponding values [0052]-[0053]).

Claims 13, 21, and 29 are essentially similar to claim 6and therefore are rejected for the same rationale.

**With respect to claims 7, 14, 22, 30**, Gorelik teaches the matching resource is selected from the group consisting of a thesaurus, a dictionary and a similarity threshold (metadata index [0205] and Correlation Threshold [0102)].

Claims 14, 22, and 30 are essentially similar to claim 7 and therefore are rejected for the same rationale.

**With respect to claims 8, 15, 23, and 31**, Gorelik teaches populating a schema consolidation table with names of the columns of the mining model schema, prior to the matching step (Value Match Table [0094]-[0095]); and

updating the schema consolidation table with names of the matching columns of the user data schema, during the updating step (pseudocode after [0094]).

Claims 15, 23, and 31 are essentially similar to claim 8 and therefore are rejected for the same rationale.

**With respect to claim 9**, Gorelik teaches A computer-implemented method for mapping a user data schema to a mining model schema, comprising:

populating a schema consolidation table with names of columns of the mining modeled schema ([0031], VMT [0094]-[0095] and figures 7A-B);

mapping the user data schema to the mining model schema by matching columns of the user data schema to corresponding columns of the mining model schema ([0031, 0058, 0118]) to provide a mapping (abstract, [0015] and [0198]) by performing a number of unique types ([0370]-0383]) of matching processes [0536] in sequence until a match is found ([0055] and 606 of figure 6), wherein at least one of the number of unique matching process does not utilize an external matching resource (metadata index; [0205]);

determining whether data within matching columns of the user data schema has a data type different than data within the corresponding columns of the mining model schema (binding; [0048] and correlation [0052]);

transforming the data within the matching columns of the user data schema if the data type is determined to be different (transformation function (transformation function ([0059], type conversion rules [0237], and transformation discovery [0048-0052]); and

providing an opportunity to manually alter the mapping after transforming the data ([0159-0160] and figure 7A-B);

presenting a final view of the mapping after providing the opportunity to manually alter the mapping (figure 7B); and

updating a matching resource and the schema consolidation table based on the mapping (updating the metadata index [0221] and figures 7A-C).

**With respect to claim 16**, Gorelik teaches A computerized system for mapping a user data schema to a mining model schema, comprising:

a processor ([0028]); and

a memory ([0540]), the memory including:

a column matching system for matching columns of the user data schema to corresponding columns of the mining model schema ([0031, 0058, 0118]) to provide a mapping (abstract, [0015] and [0198]);

a model differentiation system for determining whether data within matching columns of the user data schema has a data type different than data within the corresponding columns of the mining model schema (binding; [0048] and correlation [0052]) by performing a number of unique types ([0370]-0383]) of matching processes [0536] in sequence until a match is found ([0055] and 606 of figure 6), wherein at least one of the number of matching processes does not utilize an external matching resource (metadata index; [0205]);

a data transformation system for transforming the data within the matching columns of the user data schema if the data type is determined to be different ([0059], type conversion rules [0237], and transformation discovery [0048-0052]); and

an update system for updating a matching resource based on the mapping (updating the metadata index [0221]).

**With respect to claim 24**, Gorelik teaches A program product stored on a recordable medium for mapping a user data schema to a mining model schema, which when executed, comprises:

program code for matching columns of the user data schema to corresponding columns of the mining model schema to provide a mapping ([0031, 0058, 0118]) to provide a mapping (abstract, [0015] and [0198]) by performing a number of unique types ([0370]-0383]) of matching processes [0536] in sequence until a match is found ([0055] and 606 of figure 6 described on page 15), wherein at least one of the number of matching processes does not utilize an external matching resource (metadata index; [0205]);

program code for determining whether data within matching columns of the user data schema has a data type different than data within the corresponding columns of the mining model schema (binding; [0048] and correlation [0052]);

program code for transforming the data within the matching columns of the user data schema if the data type is determined to be different ([0059], type conversion rules [0237], and transformation discovery [0048-0052]); and

program code for updating a matching resource based on the mapping (updating the metadata index [0221]).

***Response to Arguments***

Applicant's arguments filed 8/14/2007 have been fully considered but they are not persuasive.

Applicant argues on page 12 of the remarks that Gorelik fails to teach a number of unique types of matching processes performed in sequence until a match is found. The Examiner respectfully disagrees because Gorelik teaches in a method of transformation discovery (0370) of finding a correlation between target and source columns and generating a target column value from source column values (0371). That is, in the description of this process, Gorelik teaches different (i.e. unique) types of matching processes. Specifically, this method teaches finding and determining different types of data and converting those types to a specified. For example, Gorelik teaches finding a numeric type (in string columns), and if found (0382), converting it to a number type (i.e. one type of matching process). As another type of matching process, Gorelik teaches finding columns of a numeric type and converting them to strings (0373-0376). Therein it is described by Gorelik a teaching of performing a number of unique types of matching processes in sequence as claimed.

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### *Contact Information*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M. Timblin whose telephone number is 571-272-5627. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert M. Timblin

Patent Examiner AU 2167

Primary Examiner
Art Unit 2167